

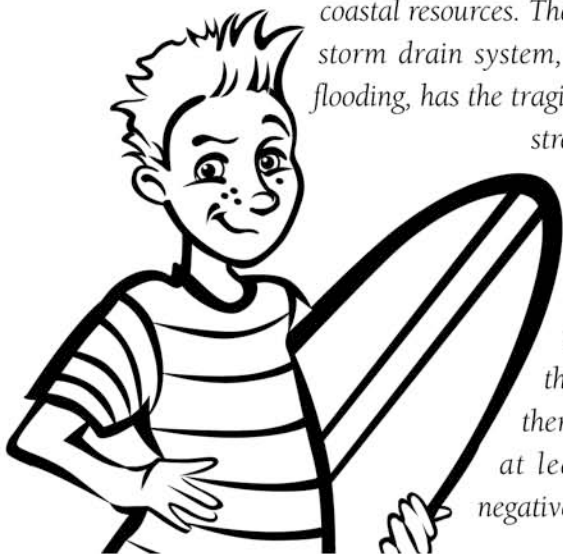
SAMPLE LESSON PLAN #4 (GRADES 4-6)

FATAL FOOD RELAY

Adapted from Heal the Bay's "Key to the Sea"

BACKGROUND

Every single day one of us makes an impact on our coastal environment. Even if you live 20 miles inland, your daily behaviors and choices make an impact on our natural coastal resources. The main reason for this situation is that our storm drain system, which was designed to protect us from flooding, has the tragic effect of transporting pollution from our streets directly to the ocean.



Our storm drains carry both marine debris and less "visible" pollution such as bacteria, viruses and toxins to the ocean. All of this pollution is harmful to the environment and the creatures that live there. There are documented cases that prove at least 267 different marine species are negatively affected by marine debris.

STANDARDS

Correlations to California's Content Standards, Grades K-12

SCIENCE

GRADE 3

Life Sciences: Adaptations in physical structure or behavior may improve an organism's chance for survival. 3b, 3c, 3d

GRADE 4

Life Sciences: All organisms need energy and matter to live and grow. 2a, 2b, 3a, 3b

GRADE 3 - 5

Investigation and Experimentation:

Scientific process is made by asking meaningful questions and conducting careful investigations. (Grade 3: 5a, 5b, 5e; Grade 4: 6a, 6c, 6d; Grade 5: 6a, 6h)

SAMPLE LESSON PLAN #4 (GRADES 4-6) CONTINUED

FATAL FOOD RELAY LESSON

Adapted from Heal the Bay's "Key to the Sea"

METHOD:

Through role-playing, students will learn about environmental problems associated with trash and pollution. They will develop a greater appreciation for wildlife and environmental stewardship.

MATERIALS:

- 16 reusable lunch bags
- "Good" food: 8 plastic food critters (jellyfish, crab, seaweed, small fish, etc.). Good foods are those sea creatures naturally find in their habitats.
- "Fatal" food: 8 examples (balloons, plastic bags, six-pack rings, plastic foam, etc.). Fatal foods are those man-made products/waste that travel through the storm drain system into the ocean.
- Storm drain diagram and pictures of impacted marine organisms if available.
- Optional: Items to mark off boundary and "sick animal" area (flags or cones).

TIME:

Preparation: 15 minutes
Activity: 30 minutes to implement

Key to the Sea, a program of Heal the Bay, endeavors to provide environmental stewardship to students grades K-5 by stimulating their sense of wonder, learning and empowerment through key experiences in the environment.

For more information about this lesson and Key to the Sea, please contact:

KEY TO THE SEA
Heal the Bay
3220 Nebraska Avenue
Santa Monica, CA 90404
1-800 HEAL BAY

*Adapted from: Splish/Splash: A Big Sweep Aquatic Primer, 1992 edited by Carla Burgess, NC Sea Grant.

PRE-ACTIVITY QUESTIONS

1. What types of trash have you seen people throw onto the ground?
2. Where does the trash come from?
3. Why is it not good for this trash to end up in the ocean and on the beach?

PROCEDURE

- A. Place students into equal relay teams.
- B. Assign each team a critter (crab, sea turtle, sea lion, bird, large fish, etc.) to be and act out as they compete in the relay.
- C. Help them understand their critter. How does it walk? What should it eat?
- D. At the end of the relay course, arrange the lunch bags with the hidden food inside. Mark this area off with stakes.
- E. Tell the first student in each line to run to the end of the relay course and select a bag.

Remaining at the end, the student should secretly open the bag and show it to the instructor positioned there, but to no one else.

If the bag has fatal food in it, the student should moan, groan, and then go to the previously designated "sick animal" section.

If the bag has "good food" in it the child will walk back in the role of his/her critter to the end of his/her team's line.

All students leave their bags behind with the teacher to reposition.

- F. Repeat the activity until all children have gone or only one team is remaining. The last team left healthy is the winner.

DISCUSSION/QUESTIONS

- A. After the relay, ask the students in the "sick animal section" to reveal what made them sick and why.
A plastic bag or balloon floating in the water looks like a delicious jellyfish to a creature such as a sea turtle. Unfortunately, the plastic can get caught in their throats or stuck in their stomachs and kill them. For birds, the plastic will trick their stomachs into thinking they are full and they can starve to death. A six-pack ring or fishing line can trap or strangle birds and fish.
- B. Ask students to reflect on what specific types of trash they have seen on the beach today. Where do you think the trash came from?
People visiting the beach often leave their trash. But most trash probably came through the storm drain system. The trash you see on the ground in your neighborhood will end up at the beach.
- C. Explain how debris goes from the gutter to the catch basin through the storm drains and then through an outfall and directly into the ocean. Storm drainpipes are different from the sewer pipes that drain the water in your house. The sewer pipes go to a treatment plant.
- D. What other types of marine pollution are a problem and how do they get into the ocean?
Oil, transmission fluid, toxins and animal waste are carried to the ocean as urban runoff.
People dumping oil onto the street or into storm drains, not picking up after their pets or hosing oil down their driveways are sources of storm water pollution.
- E. How do balloons end up in the water?
What goes up, must come down! Balloons released at community celebrations, birthday parties, and the ones you let go can be deadly.

Slogan: Only let rain go down the storm drain!